

# BOTANICAL MUSEUM LEAFLETS

## HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, JANUARY 30, 1963

VOL. 20, No. 4

### NEW ORCHIDS FROM CEYLON

BY

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THE present paper is the result of a detailed field investigation of the orchids growing in the Ceylon jungles, undertaken during 1958–60. Nine new species are proposed, six of them belonging to the genus *Oberonia* and one each to the genera *Cirrhopetalum*, *Saccolabium* and *Taeniophyllum*. The type specimens are deposited in the Herbarium Peradeniya. These new species have been checked with the extensive collections of the Ames Orchid Herbarium, and they form a part of my forthcoming treatment of the Orchids of Ceylon.

I wish to express my sincere gratitude and appreciation to Mr. Leslie A. Garay of the Oakes Ames Orchid Herbarium for his valuable suggestions and for rendering the descriptions into Latin.

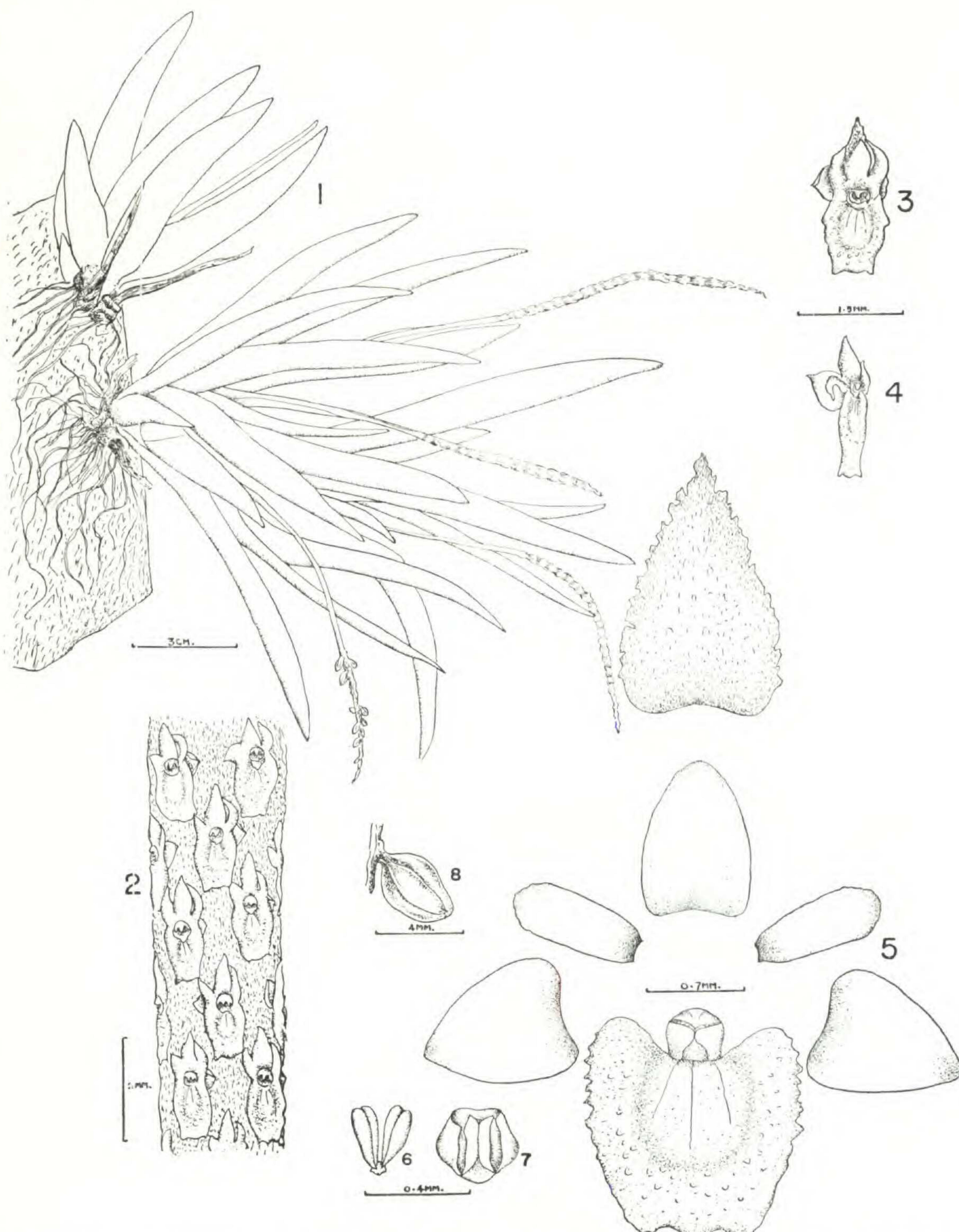
#### ***Oberonia quadrilatera* Jayaweera sp. nov.**

Epiphytica, caespitosa, leviter pseudobulbosa. Foliis paucis, distichis, equitantibus carnosis, 4.5–17 cm. longis, 1–1.4 cm. latis, linear-i-ensiformibus, apice obtusis, basi pseudobulbum amplectentibus. Inflorescentia cylindrica, spiciformi, erecta vel pendenti, perdense multiflora. Bracteis reflexis, ovatis, pilosis, acutis, margine crenatis, 2 mm. longis, 1.1–1.2 mm. latis. Floribus minutis, 2 mm. in diametente. Sepalo postico reflexo, oblongo-ovato,

apice obtuso vel rotundato, 0.9–1.1 mm. longo, 0.6–0.8 mm. lato; sepalis lateralibus reflexis, concavis, trianguli-ovatis, obtusis, 1.1 mm. longis, 0.5–0.9 mm. latis. Petalis linear-i-oblongis, recurvis spiraliterque contortis, 0.1–1 mm. longis, 0.3–0.4 mm. latis. Labello carnoso superiori, sessili, concavo, quadrato, apice 3-lobo; basi subcordato, margine irregulariter dentato, disco obscure papilloso, 1–1.6 mm. longo, 1.5–1.6 mm. lato. Columna humili, crassa, 0.4 mm. alta, 0.3 mm. crassa. Capsula ellipsoidea, sessili, 4 mm. longa.

Tufted epiphyte with slightly pseudobulbous stems. Leaves few, distichous, equitant, fleshy, 4.5–17 cm. long, 1–1.4 cm. broad, linear ensiform or almost straight, obtuse, bases ensheathing the pseudobulb. Flowers minute, greenish yellow in cylindrical, straight or drooping, dense-flowered spiciform racemes. Peduncle 8–9.5 cm. long, flat, green or yellowish, the topmost leaf adnate to it and attaining  $\frac{1}{3}$  to  $\frac{1}{2}$  the length. Flower-bearing portion 6–7.5 cm. long and 3 mm. in diameter. The first flowers to open located in the middle of the raceme and subsequent ones opening progressively and simultaneously upwards and downwards, terminal flowers not opening (Plate XI). Flowers 2 mm. long from the tip of dorsal sepal to the lip and 1.16 mm. broad. Floral bracts 2 mm. long, 1.16–1.2 mm. broad, recurved, ovate, pilose, acute, margin broken up irregularly. Dorsal sepal 0.9–1.1 mm. long, 0.68–0.8 mm. broad, recurved, oblong-ovate, obtuse or rounded; lateral sepals 1.1 mm. long, 0.56–0.9 mm. broad, recurved, concave, triangular ovate, obtuse; petals 0.86–1 mm. long, 0.3–0.4 mm. broad, linear-oblong, much recurved and curling behind the dorsal sepal. Lip green or yellowish green, superior, sessile, thick, 1–1.6 mm. long, 1.5–1.6 mm. broad at the base, tapering to 0.9 mm., quadrate, 3-veined, concave; base subcordate, apex bluntly and obscurely trifid, margin

PLATE XI



OBERONIA QUADRILATERA *Jayaweera*. 1, plants with inflorescences. 2, part of the inflorescence showing the arrangement of the flowers on the rachis. 3, flower from front. 4, flower from side, three quarters view. 5, bract, sepals, petals, lip and column spread out from front. 6, pollinia with gland. 7, anther from front. 8, fruit.

thick, distantly and irregularly dentate. Column short, globular, 0.44 mm. high, 0.34 mm. broad. Anther terminal, incumbent, 2-loculed; pollinia 4, waxy, club-shaped, cohering in pairs to a small gland, 0.24 mm. long, 0.1 mm. broad. Fruit a sessile, ellipsoid, ridged capsule 4 mm. long and 2 mm. in diameter.

This species is allied to *Oberonia zeylanica* Hook.f. from which it differs in the linear-oblong petals and irregularly dentate lip, subcordate at the base.

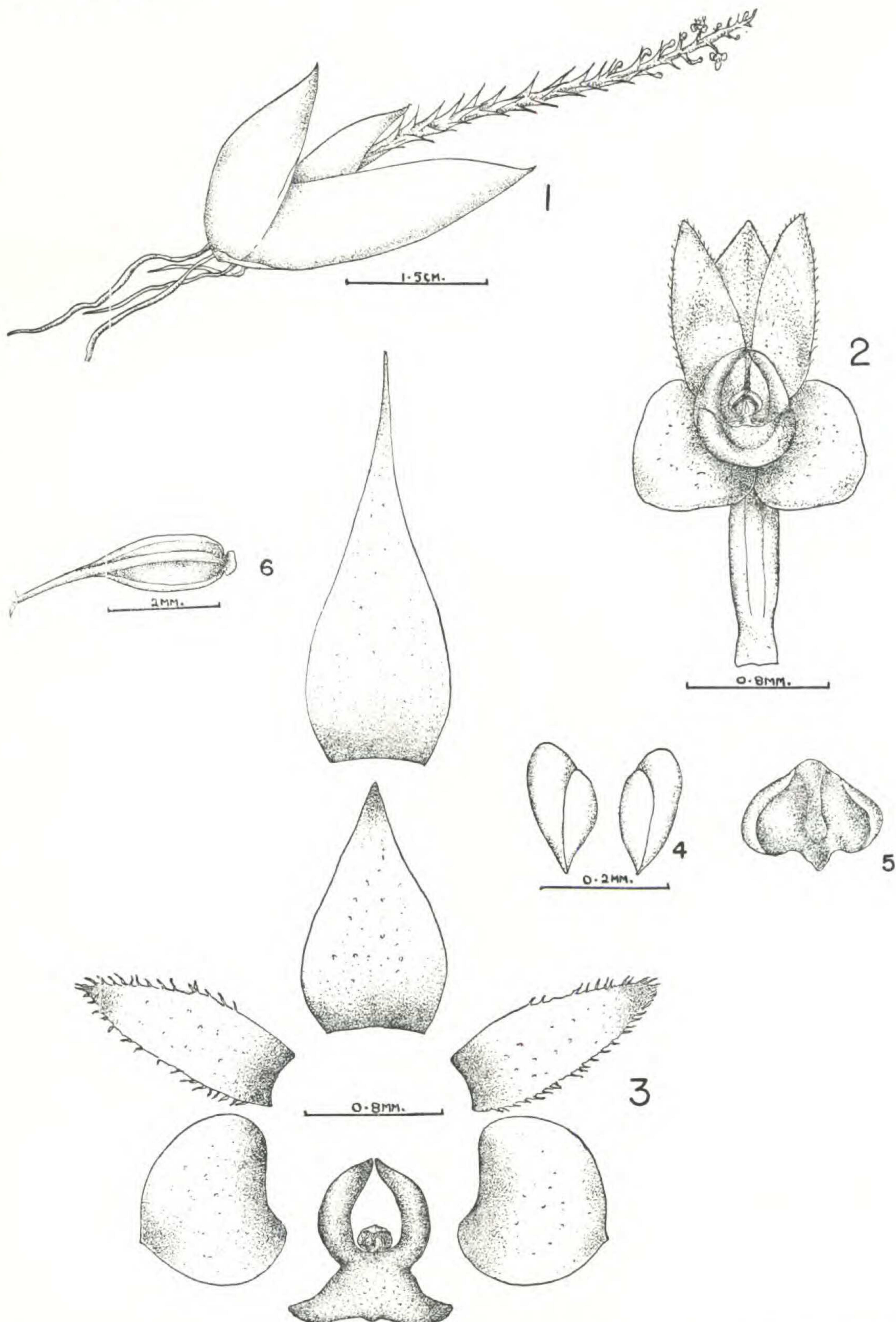
CEYLON: Rangala, in submontane or midcountry tropical wet evergreen forests at 1284 m. altitude, September 22, 1959, Jayaweera 2001 (TYPE); Hunnasgiriya, at 1300 m. altitude, October 13, 1960, Jayaweera 2191. It flowers from August to October.

### ***Oberonia dolabrata* Jayaweera sp. nov.**

Epiphytica, caespitosa, non pseudobulbosa. Caulibus lateraliter compressis, abbreviatis. Foliis distichis, equitantibus, oblongis vel oblongo-lanceolatis, acutis, 1.3–1.7 cm. longis, 0.3–0.5 cm. latis. Pedunculo abbreviato, bracteis non floriferis usque ad basin omnino obtectis. Racemo suberecto, 4 cm. longo. Bracteis ovatis, apice acuminatis, 1.8–2.3 mm. longis, 0.7–0.8 mm. latis. Floribus minimis, 1.3 mm. in diam. Sepalo postico ovato, 1–1.4 mm. longo, 0.5–0.8 mm. lato; sepalis lateralibus oblique late orbiculari-ovatis, obtusis, 0.6–0.8 mm. longis, 0.7–0.9 mm. latis. Petalis oblongo-lanceolatis, subacutis, margine ciliolatis, 1.2 mm. longis, 0.3–0.4 mm. latis. Labello superiori, sessili, carnoso, 3-lobo; lobis lateralibus subulatis, columnam circumdantibus, lobo terminali porrecto, dolabriformi, toto labello 0.6 mm. longo, 0.7 mm. lato. Columna abbreviata, crassa, 0.2 mm. alta crassaque. Ovario pedicellato 1.6 mm. longo. Capsula cum pedicello 2.3 mm. longo.

Small tufted epiphyte with compressed, non-pseudo-bulbous stems. Leaves 3, fleshy, distichous, laterally compressed, 1.3–1.7 cm. long, 0.3–0.5 cm. broad, oblong

PLATE XII



OBERONIA DOLABRATA Jayaweera. 1, plant with inflorescences. 2, flower from front. 3, bract, sepals, petals, lip and column spread out from the front; lip, 4, pollinia. 5, anther from inside magnified. 6, fruit.

or oblong-lanceolate, acute, bases confluent with the stem (Plate XII). Flowers reddish brown, 1.3 mm. across, in suberect racemes 4 cm. long. Peduncle very short, covered with sterile bracts right down to the base and adnate to the topmost leaf. Floral bracts 1.8–2.3 mm. long, 0.7–0.8 mm. broad, ovate, acuminate, acute. Dorsal sepal 1–1.4 mm. long, 0.56–0.8 mm. broad, ovate, acute; lateral sepals 0.6–0.8 mm. long, 0.7–0.9 mm. broad, broadly and obliquely orbicular-ovate, obtuse; petals 1.2 mm. long, 0.36–0.4 mm. broad, oblong-lanceolate, subacute, ciliate, appressed to the dorsal sepal and lying within it. Lip superior, sessile, 0.6 mm. long, 0.72 mm. broad, fleshy, 3-lobed: lateral lobes cylindrical-subulate and arched behind the column: mid-lobe trifid, hatchet-shaped, lateral lobules diverging. Column globular, 0.2 mm. high and 0.26 mm. broad. Anther terminal, incumbent, 2-loculed; pollinia 4, in two pairs, individual pollinium of each pair unequal, appressed and club-shaped, larger pollinia 0.2 mm. long, 0.1 mm. broad and the smaller ones 0.14 mm. by 0.06 mm. Ovary with pedicel 1.6 mm. long. Fruit stalked, 2.3 mm. long, 0.9 mm. in diameter.

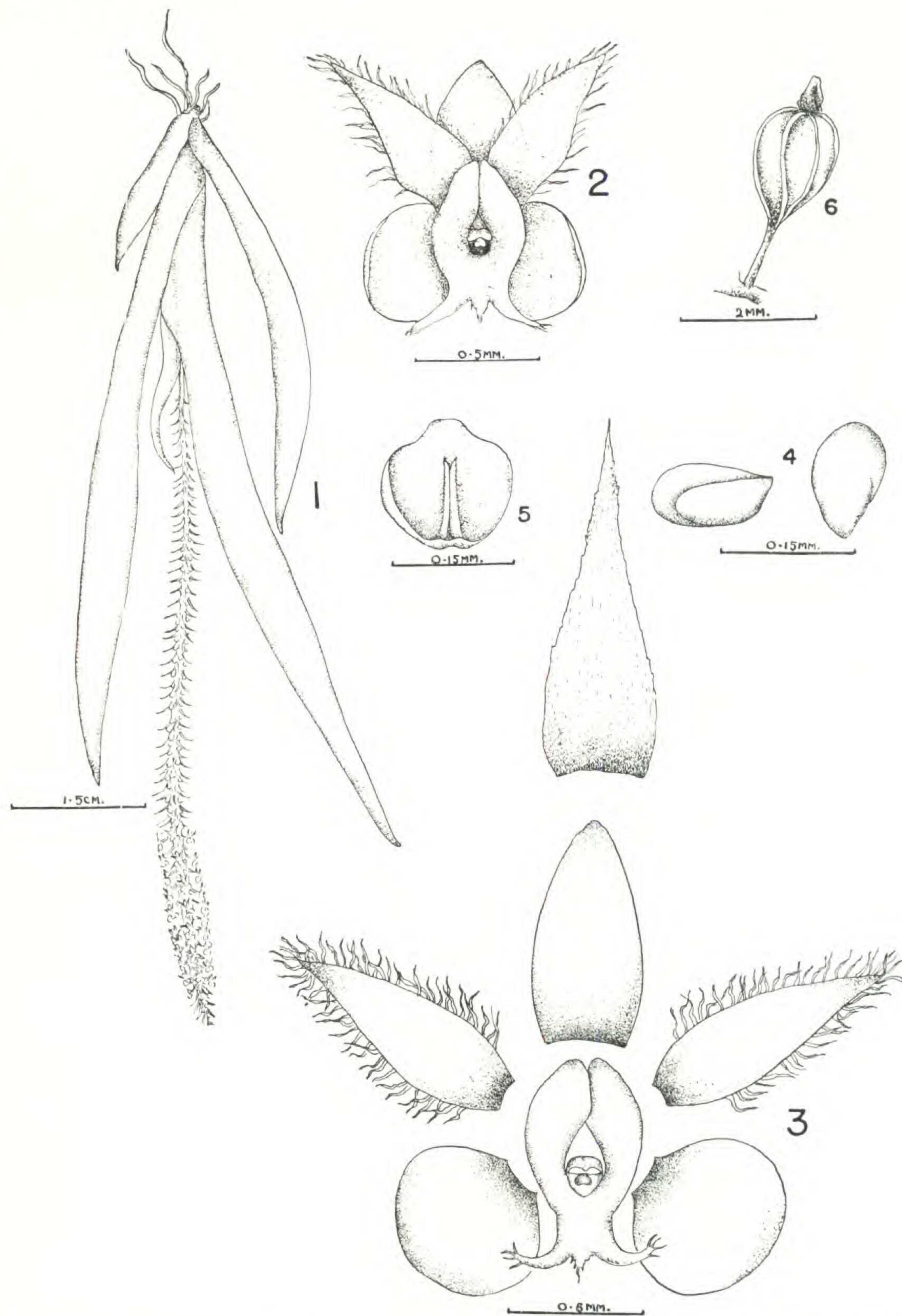
This species is allied to *Oberonia tenuis* Lindl. from which it differs in the small size of the plant, ovate dorsal sepal and ciliated petals which are subacute at their apices.

CEYLON: Rangala (Corbet's Gap), in submontane or midcountry tropical wet evergreen forests at 1285 m. altitude, March 14, 1960. *Jayaweera 2142*.—Same locality, April 4, 1960, *Jayaweera 2160* (TYPE). It flowers from January to April.

### ***Oberonia claviloba* *Jayaweera sp. nov.***

Epiphytica, caespitosa. Caule abbreviato, compresso. Foliis paucis, distichis, equitantibus, rectis vel subfalcatis, 4–6.5 cm. longis, 0.3–0.6 cm. latis. Inflorescentia spiciformi, erecta, 6.8 cm. longa; pedunculo 2 cm. longo.

PLATE XIII



OBERONIA CLAVILOBA Jayaweera. 1, plant with inflorescence. 2, flower from front. 3, bract, sepals, petals and lip spread out from front. 4, pollinia from side and back. 5, anther from inside. 6, fruit.

Bracteis ovato-lanceolatis, acuminatis, margine remote obscureque serrulatis, 1.2–1.6 mm. longis, 0.4–0.5 mm. latis. Floribus minutis, 1.1 mm. in diam. Sepalo postico oblongo-ovato vel oblongo-lanceolato, obtuso, 1 mm. longo, 0.4–0.5 mm. lato; sepalis lateralibus orbicularibus, 0.6 mm. longis, 0.7 mm. latis. Petalis patentibus, lanceolatis, acutis, margine ciliolatis, 1.1–1.2 mm. longis, 0.3 mm. latis. Labello carnoso, 3-lobo: lobis lateralibus clavatis, columnam involventibus, 0.8 mm. longis, lobo intermedio 3-partito, partitionibus lateralibus divergentibus, apice ciliolatis, 0.3 mm. longis, partitione media triangulari, acuta, 0.1 mm. longa; toto labello 1.2 mm. longo. Columna humili, crassa. Ovario pedicellato 0.6 mm. longo.

Tufted epiphyte with very short, compressed, non-pseudobulbous stems. Leaves few, 4 or 5, distichous, laterally compressed, not fleshy, 4–6.5 cm. long, 0.3–0.6 cm. broad, straight or subfalcate, acute, veins obscure, bases confluent with the stem (Plate XIII). Flowers brown in obscurely whorled, spiciform, erect racemes, 6.8 cm. long. Apical flowers opening first followed by the lower flowers progressively downwards, buds at the very top not opening. Peduncle 2 cm. long, adnate to the uppermost, linear, acuminate, arched leaf, lower bracts sterile. Flowers 1.1 mm. across. Floral bracts 1.2–1.6 mm. long, 0.4–0.5 mm. broad, ovate, acuminate, acute, margin slightly and distantly serrate. Dorsal sepal 1 mm. long, 0.46–0.54 mm. broad, oblong-ovate or oblong-lanceolate, obtuse; lateral sepals 0.6 mm. long, 0.76 mm. broad, orbicular, rounded; petals 1.1–1.2 mm. long, 0.36 mm. broad, lanceolate, spreading, acute, ciliate, almost shaggy; lip 1.2 mm. long, fleshy: lateral lobes 0.8 mm. long, clavate, overlapping each other behind the rostrum, mid-lobe trifid and ciliated at their apices, lateral lobules 0.3 mm. long, curving outwards,

acuminate, mid-lobule 0.1 mm. long triangular, acute. Column very small, 0.2 mm. high, 0.16 mm. broad. Anther terminal, incumbent, 2-loculed; pollinia 4, cohering in two pyriform pairs, each pair 0.14 mm. long, 0.08 mm. broad, consisting of a larger pollinium and a smaller one appressed laterally. Ovary with pedicel 0.5 mm. long. Fruit a minute globular or obovate, stalked capsule, 1.6 mm. long, 1.2 mm. in diameter.

This species differs from others in the thin, subfalcate leaves, ciliated petals, club-shaped arching lateral lobes of the lip and the ciliated apices of the trifid mid-lobe.

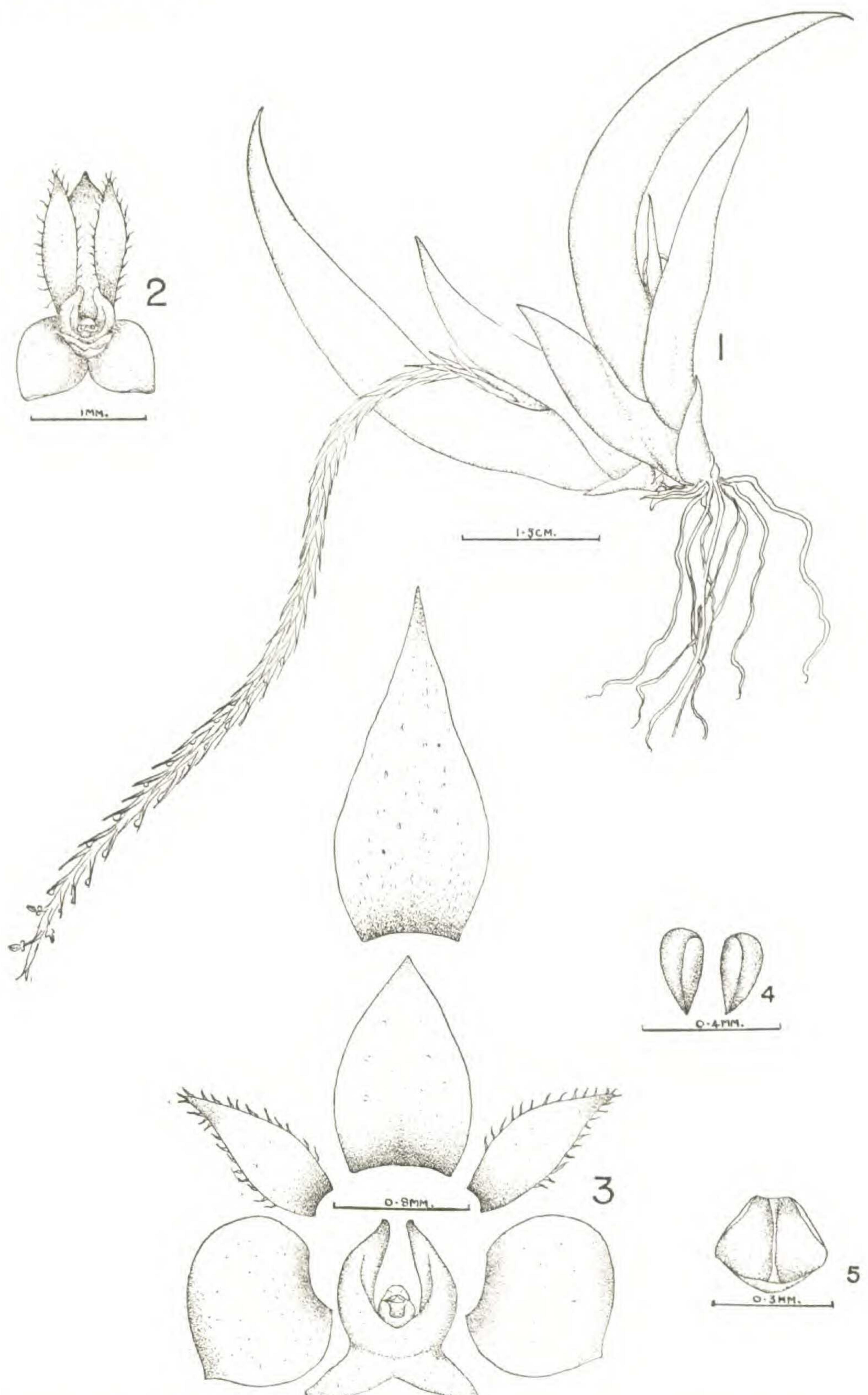
CEYLON: Ambagamuwa at 577 m. altitude in the transitional jungle between the tropical wet evergreen forests and the submontane or midcountry tropical wet evergreen forests, December 30, 1959, Jayaweera 2144 (TYPE). It flowers in December.

### **Oberonia Wallie-Silvae Jayaweera sp. nov.**

Epiphytica, caespitosa, non pseudobulbosa. Foliis distichis, carnosis, equitantibus, ensiformibus, apice acuminatis, 2–5.2 cm. longis, 0.4–0.7 cm. latis. Inflorescentia spiciformi, usque ad 10 cm. longa; pedunculo usque ad 10 cm. longo, et usque ad basin bracteis non floriferis omnino obtecto. Bracteis ovatis, acuminatis, 2 mm. longis, 0.9 mm. latis. Floribus minutissimis, 1.2 mm. in diam. Sepalo postico ovato, acuto, 1.2 mm. longo, 0.7 mm. lato; sepalis lateralibus oblique suborbicularibus, obtusis, 0.8 mm. longis, 1 mm. latis. Petalis lanceolatis, acutis, margine ciliatis, 1 mm. longis, 0.3 mm. latis. Labello 3-lobo, carnoso; lobis lateralibus linearifalcatis, crescentiformibus, lobo intermedio bifido, partitionibus inter se divaricatis, toto labello 1 mm. longo. Columna minutissima, globosa. Ovario pedicellato 1.4 mm. longo.

Tufted epiphyte with compressed non-pseudobulbous stems. Leaves distichous, fleshy, laterally compressed, 2–5.2 cm. long, 0.4–0.7 cm. broad, ensiform, decurved,

PLATE XIV



*OBERONIA WALLIE-SILVÆ Jayaweera.* 1, plant with inflorescence. 2, flower from front. 3, bract, sepals, petals, lip and column spread out from front. 4, pollinia. 5, anther from inside.

acuminate, acute, bases confluent with the stem, veins obscure (Plate XIV). Flowers very small, reddish brown, 1.2 mm. across in spiciform racemes measuring about 10 cm. in length. Peduncle closely covered with sterile bracts right down to the base. Floral bracts 2 mm. long, 0.9 mm. broad, ovate, acuminate, acute. Dorsal sepal 1.2 mm. long, 0.74 mm. broad, ovate, acute; lateral sepals 0.8 mm. long, 1 mm. broad, obliquely suborbicular, obtuse; petals lanceolate, 1 mm. long, 0.36 mm. broad, acute, ciliate; lip 1 mm. long, thick: lateral lobes linear, falcate, horseshoe-shaped around the column: mid-lobe thick, 1 mm. broad, bifid, sometimes trifid, lateral lobules bluntly subulate and diverging. Column very small, globular, at the base of the lateral lobs. Anther terminal, incumbent, 2-loculed; pollinia 4, waxy, in two pairs, individuals of each pair unequal: each pair of pollinia 0.24 mm. long, 0.1 mm. broad, pyriform. Ovary with pedicel 1.4 mm. long.

This species does not appear to have any close allies. It is distinguished from others in its ensiform, decurved, acuminate leaves; lanceolate and ciliated petals; linear-falcate lateral lobes and the bifurcated, diverging mid-lobe of the lip.

CEYLON: Rangala, in submontane or midcountry tropical wet evergreen forests at 1285 meters altitude, March 14, 1960, Jayaweera 2143 (TYPE). It flowers in February and March.

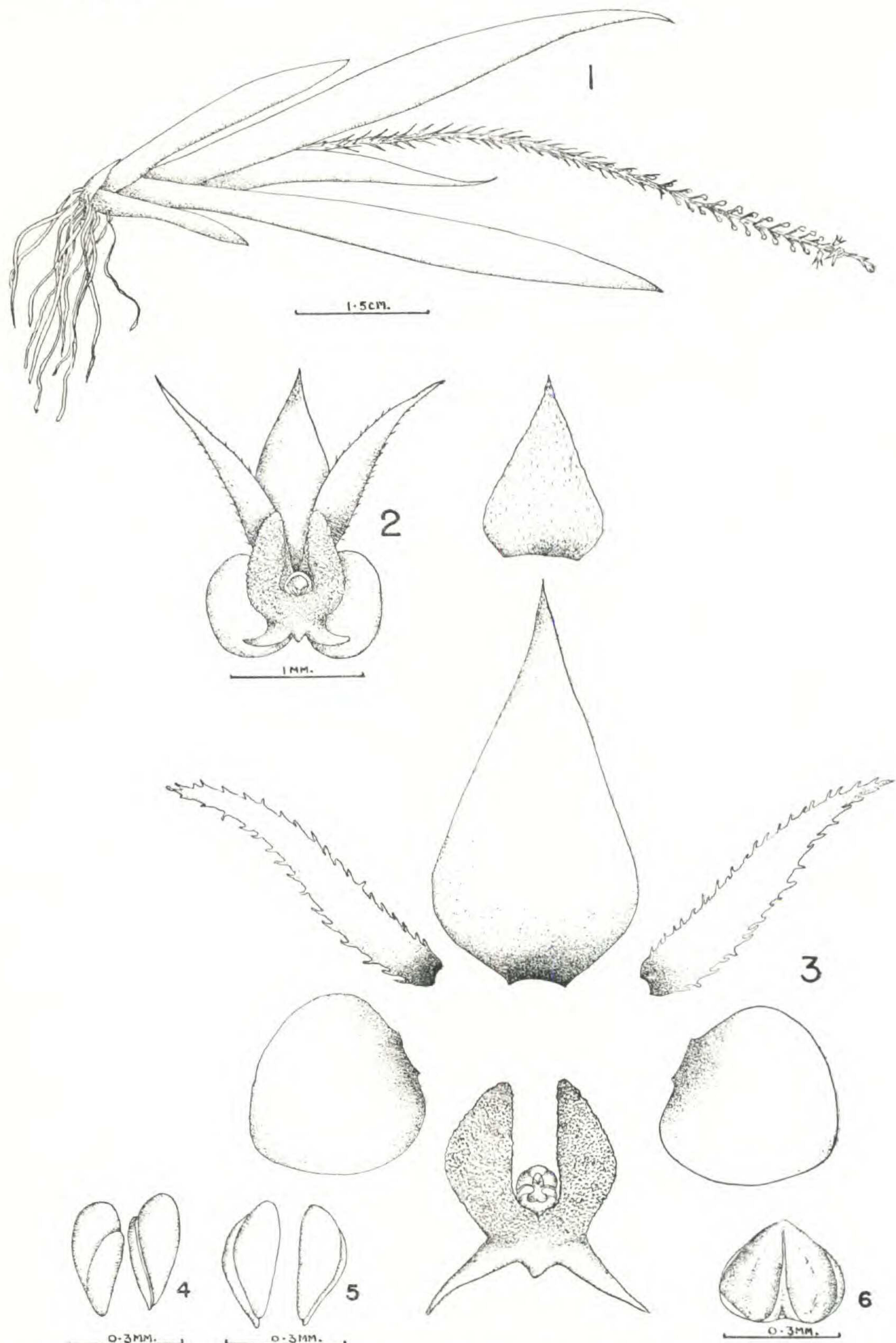
**Oberonia weragamaensis Jayaweera sp.. nov.**

Epiphytica, caespitosa, ebulbosa. Foliis 4-5, distichis, equitantibus, carnosus, lanceolatis vel ensiformibus, acutis, 2-8 cm. longis, 0.3-0.6 cm. latis. Inflorescentia racemosa, erecta, perdense multiflora. Bracteis ovatis (triangulari-ovatis), acutis, 1 mm. longis, 0.5 mm. latis. Floribus minutis, 2 mm. longis. Sepalo postico ovato, acuminato, 1.2 mm. longo, 0.5 mm. lato; sepalis lateraliibus suborbicularibus, apice rotundatis, 0.6 mm. longis,

0.7 mm. latis. Petalis linear-lanceolatis, acuminatis, margine ciliolatis seu potius denticulatis, 1.4 mm. longis, 0.2 mm. latis. Labello 3-lobo, lobis lateralibus subtriangularibus, erectis, carnosus, papillosis, lobo intermedio 3-fido, partitionibus lateralibus divaricatis, subulatis, partitione intermedia dentiformi, triangulari, toto labello 1.2 mm. longo, 0.8 mm. lato. Columna abbreviata, crassa, 0.4 mm. alta. Ovario cum pedicello 0.8 mm. longo.

Tufted epiphyte with very short, compressed non-pseudobulbous stems. Leaves 4 or 5, distichous, laterally compressed, fleshy, 2–8 cm. long, 0.3–0.6 cm. broad, lanceolate or ensiform, acute, bases confluent with the stem and veins obscure (Plate XV). Flowers reddish brown, in whorled racemes 5–6 cm. long, first flowers to open located a little way below the terminal end and then progressively downwards, terminal flowers not opening. Flowers 2 mm. long, from the tip of the dorsal sepal to the apex of the lip and 1.2 mm. across. Floral bracts 1 mm. long, 0.52 mm. broad, ovate, acute, margin slightly irregular. Dorsal sepal 1.2 mm. long, 0.52 mm. broad, ovate, acuminate, acute; lateral sepals 0.6 mm. long, 0.74 mm. broad, suborbicular, rounded; petals longer than sepals, 1.4 mm. long, 0.28 mm. broad, linear-lanceolate, acuminate, ciliate or denticulate; lip 1.2 mm. long, 0.8 mm. broad: lateral lobes 0.7 mm. long, subtriangular, erect, fleshy, parallel, papillose, blunt at the apex, broadening towards the middle: mid-lobe trifid, the lateral lobules subulate, acuminate diverging and looped back posteriorly in the open flower, the mid lobule triangular and much shorter. Column short, 0.4 mm. high, 0.36 mm. broad. Anther terminal, incumbent, 2-loculed; pollinia 4, waxy, cohering in two pyriform pairs; larger pollinia 0.3 mm. long, 0.12 mm. broad, oblong, smaller ones 0.24 mm. long, 0.08 mm. broad and disk-shaped. Ovary with pedicel 0.8 mm. long, 0.3 mm. in diameter.

PLATE XV



OBERONIA WERAGAMAENSIS Jayaweera. 1, plant with inflorescence. 2, flower from front. 3, bract, sepals, petals, lip and column spread out from front; bract, dorsal sepal, lateral sepals, petals, lip and column. 4, young pollinia. 5, older pollinia. 6, anther from inside.

This species differs from others in the linear-lanceolate, denticulate petals, subtriangular, erect, parallel lateral lobes of the lip and diverging, subulate, lateral lobules of the mid-lobe.

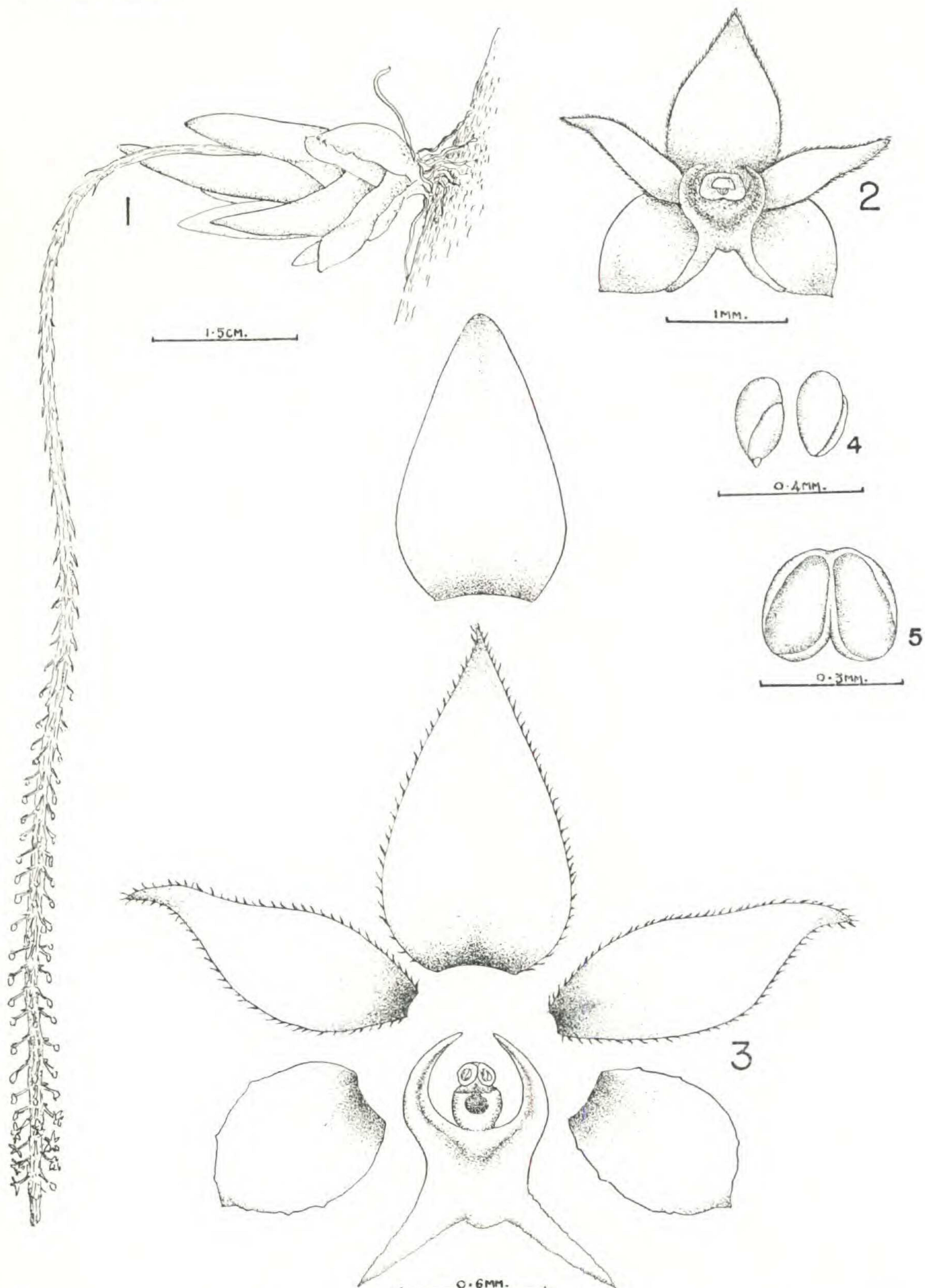
CEYLON: Ratnapura District, Weragama, in tropical wet evergreen forests at 220 meters altitude, November 30, 1959, Jayaweera 2037 (TYPE), flowers reddish brown, epiphytic on *Wormia triquetra* Rottb., *Celtis Wightii* Planch., etc. It flowers in October and November.

**Oberonia fornicata Jayaweera sp. nov.**

Epiphytica, caespitosa, inflorescentia inclusa usque ad 20 cm. alta. Foliis paucis, carnosis distichis, equitantibus, ensiformibus, apice acutis, basi non articulatis, 1.5–2.5 cm. longis, 0.5–0.7 cm. latis. Inflorescentia satis dense multiflora, pendenti, pedunculo 1.5 cm. longo inclusa usque ad 14 cm. longa. Bracteis ovatis, obtusis, 1.2 mm. longis, 0.5–0.7 mm. latis. Sepalo postico, ovato, acuto, margine ciliato, 1.4 mm. longo, 0.8 mm. lato; sepalis lateralibus suborbicularibus, obtusis, margine integris vel remote irregulariterque subdenticulatis, 1 mm. longis, 0.9 mm. latis. Petalis lanceolatis vel ovato-lanceolatis, acuminatis, margine ciliatis, 1.4 mm. longis, 0.5 mm. latis. Labello sepalis lateralibus aequilongo, 3-lobo, lobis lateralibus linear-i-falcatis, columnam involventibus lobo intermedio 3-fido, partitionibus lateralibus subulatis, divergentibus, partitione intermedia abbreviata, dentiformi, obtusa. Columna globosa, 0.3 mm. alta. Ovario pedicellato 1.7 mm. longo.

Tufted epiphyte with compressed, non-pseudobulbous stems. Whole plant 3–3.5 cm. high. Leaves few, reddish green, fleshy, distichous, laterally compressed, short, oblong-ensiform, 1.5–2.5 cm. long, 0.5–0.7 cm. broad, acute, bases confluent with the stem (Plate XVI). Flowers greenish brown with a very pale coral lip; drooping racemes 14 cm. long, with sterile basal bracts. Peduncle 1.5 cm. long, bracteate almost to the base. Flowers in

PLATE XVI



OBERONIA FORNICATA Jayaweera. 1, plant with inflorescence. 2, flower from front. 3, bract, sepals, petals, lip and column with the anther flapped over from front: lateral sepals; lip magnified. 4, pollinia. 5, anther from inside.

distant, whorled fascicles on a very slender rachis. Floral bracts ovate, 1.2–1.26 mm. long, 0.56–0.7 mm. broad, obtuse and entire. Dorsal sepal 1.4 mm. long, 0.8 mm. broad, ovate, acute, margin ciliate; lateral sepals 1 mm. long, 0.9 mm. broad, orbicular-oblong, margin entire or slightly denticulate; petals lanceolate, 1.4 mm. long, 0.54 mm. broad, acuminate, acute, ciliate; lip shorter than sepals or about the same length as lateral sepals, 3-lobed; lateral lobes linear, falcate, ascending forming an arc round the column: mid-lobe trifid, the two lateral lobules subulate, diverging, mid-lobule short and blunt. Column globular, 0.36 mm. high, 0.3 mm. broad. Anther terminal, incumbent, 2-loculed; pollinia 4 in two pairs, one in each pair larger than the other; larger pollinia 0.24 mm. long, 0.14 mm. broad, one phase flattened fitting in the smaller ones: smaller pollinia 0.2 mm. long, 0.8 mm. broad and disk-shaped. Ovary with pedicel 1.7 mm. long.

This species does not appear to have any close allies. It is distinguished by the ciliated dorsal sepal and petals, and the lip partly resembling *Oberonia Wallie-Silvae* and partly *O. weregamaensis*.

CEYLON: Rangala (Corbet's Gap), in submontane or midcountry tropical wet evergreen forests at 1285 meters altitude, Jayaweera 2025 (TYPE) with no date of collection. It flowers in October.

### **Cirrhopetalum roseum Jayaweera sp. nov.**

Epiphytica, pseudobulbosa, repente. Radicibus filiformibus, leviter flexuosis, glabris. Rhizomate prorepenti, elongato remote pseudobulbifero. Pseudobulbis ovoideis, vaginis scariosis protectis, unifoliatis, 1–1.5 cm. altis. Folio oblongo vel oblanceolato, interdum linearior-oblongo, valde coriaceo, apice emarginato, basi in petiolum brevem producto, 3.2–10.8 cm. longo, 1–1.5 cm. lato. Inflorescentia laterali, erecta, umbellata, 3.8–4.3 cm. longa. Bracteis lanceolatis, acuminatis, 3-nervatis,

PLATE XVII



*CIRRHOPTALUM ROSEUM* *Jayaweera.* 1, plant with inflorescence. 2, flower from front. 3, lip, column and mentum from side. 4, bract, dorsal sepal, petals, lip and column spread out from front; lateral sepals natural position. 5, pollinia. 6, anther from inside. 7, fruit.

4.8 mm. longis, 1.4 mm. latis. Floribus in umbello paucis (6-8), purpurascensibus, 1.2 cm. longis. Sepalo postico, elliptico, concavo, apice acuto, 5-nervato, 5.5 mm. longo, 3 mm. lato; sepalis lateralibus inter se usque ad apicem connatis, elliptico oblongis, concavis, apice bifidis, basi leviter saccatis, 13 mm. longis, 5 mm. latis. Petalis triangularibus vel triangulari-ovatis, acutis, 3-nervatis, margine serrulatis, 2.9 mm. longis, 2 mm. latis. Labello carnoso, valde recurvo versatili, apice truncato, basi ad pedem columnae adnato, 7-nervato, 4.6 mm. longo, 1.9 mm. lato. Columna cylindrica, ebrachiata, basi in pedem longum producta. Ovario pedicellato 7.2 mm. longo.

Epiphyte with pseudobulbous stems on a creeping rootstock. Pseudobulbs 1–1.5 cm. long, 0.8–1.2 cm. in diameter at the base, ovoid, tapering to the apex, ribbed, green, enveloped in old, brown, papery sheaths; internodes on rootstock 2.5–5 cm. long, ensheathed in dark brown scaly leaves; roots filiform, branched, tufted at the bases of pseudobulbs. Leaves solitary, 3.2–10.8 cm. long, 1–1.5 cm. broad, oblong, oblanceolate or linear-oblong, thickly coriaceous, emarginate, shortly petioled at the summit of pseudobulbs; petioles 3–4 mm. long, grooved (Plate XVII). Flowers purplish pink, 1.2 cm. long, 0.4 cm. broad in 6–8 flowered umbels, arising from the bases of the pseudobulbs. Peduncle 3.8–4.3 cm. long, red streaked with papery scaly bracts. Floral bracts 4.8 mm. long, 1.4 mm. broad, lanceolate, acuminate, acute, 3-veined. Dorsal sepal 5.5 mm. long, 3 mm. broad, elliptic, concave, obtuse, 5-veined bending over to form a hood over the rostrum and petals; lateral sepals 13 mm. long, 5 mm. broad, curving inwards and cohering in the mid-line along their outer edges, obtuse, adnate to the foot of the column at their bases, 5-veined; petals triangular-ovate, 2.9 mm. long, 2 mm. broad, acute, serrate, 3-veined; lip 4.6 mm. long, 1.9 mm. broad, oblong-

ovate, thick, fleshy, strongly recurved, joining the foot, versatile, 7-veined, the two extreme pairs of veins intertwined forming a network. Column 1.8 mm. high, 1.3 mm. broad, the base extending into an upcurved foot. Anther terminal, 2-loculed; pollinia 4, waxy, collateral in two pairs, oblong, the inner ones of each pair smaller: outer pollinia 0.6 mm. long, 0.26 mm. in diameter and the inner ones 0.46 mm. long, 0.1 mm. in diameter. Ovary with pedicel 7.2 mm. long. Fruit a short pedicelled, oblong, cylindrical capsule, 2 cm. long, 0.7 cm. in diameter.

This species is allied to *Cirrhopetalum Wightii* Thw. from which it differs in the smaller flowers, elliptic dorsal sepal, smaller lateral sepals and petals, oblong-ovate lip and larger pollinia.

CEYLON: Ambagamuwa at 578 meters in the transitional jungle between the tropical wet evergreen forests of the low country and the submontane or midcountry tropical wet evergreen forests, January 22, 1960, Jayaweera 2120 (TYPE).—Same locality, February 23, 1960, Jayaweera 2128. It flowers from January to March.

### **Saccolabium tortifolium Jayaweera sp. nov.**

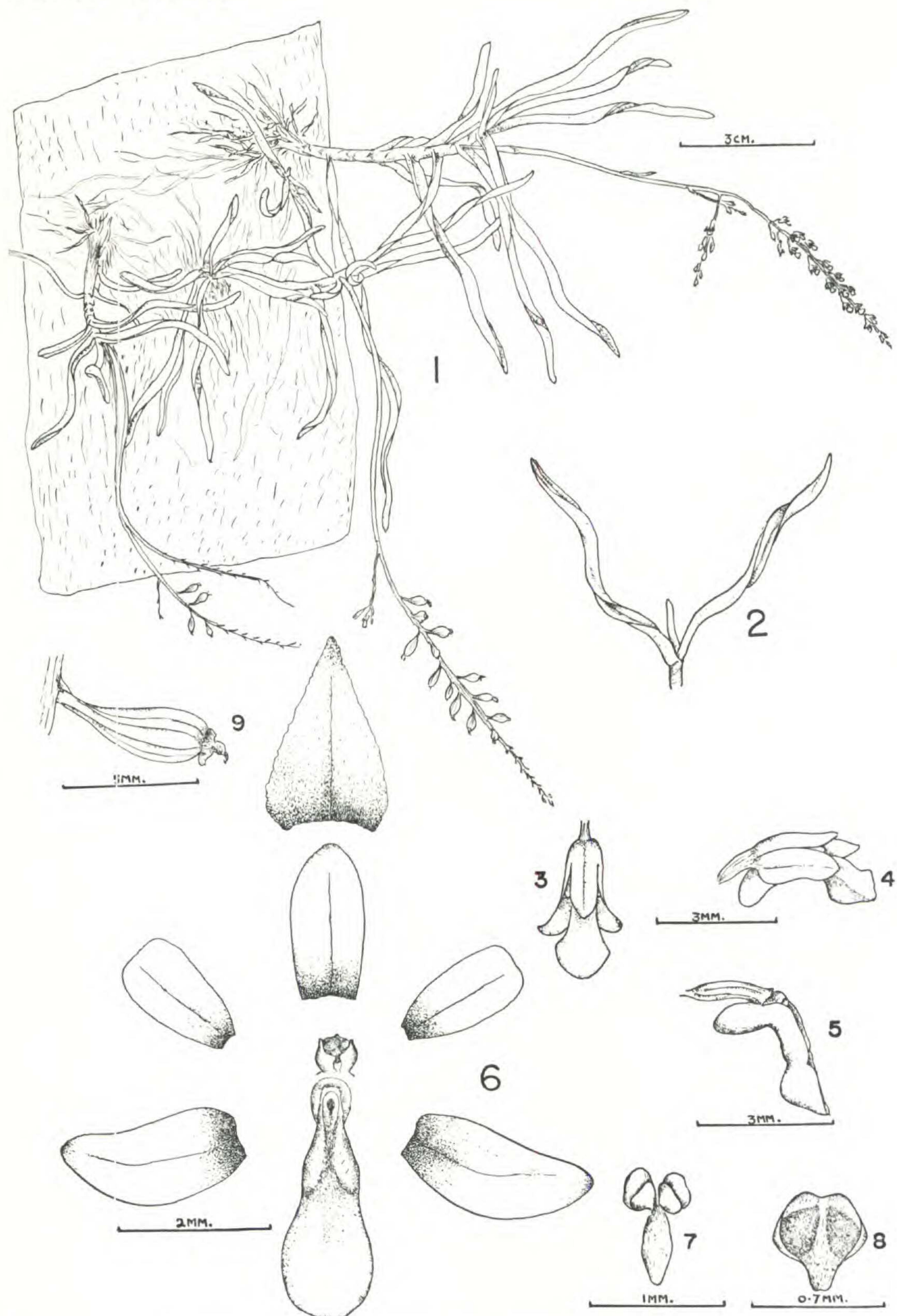
Epiphytica, caespitosa, non pseudobulbosa. Caulibus erectis, demum denudatis, deinde foliis 7–18, distichis tortis, semiteretibus obtectis. Foliis linearibus, carnosis 4–6 cm. longis, 0.3 cm. latis. Inflorescentia ex axillis foliorum superiorum nata, racemosa vel interdum pauciramosa, 13–14 cm. longa; pedunculo compresso, 6.5–7 cm. longo, rachide simplici, spiciformi, laxe pluriflora. Bracteis ovatis vel triangulari-ovatis, acutis, uninervis, 1.8–2.4 mm. longis, 1.4–1.6 mm. latis. Floribus minutis, albis. Sepalo postico oblongo, obtuso uninervato, 2 mm. longo, 1.1 mm. lato; sepalis lateralibus oblique ovato-oblongis, obtusis, uninervatis, 2.4–2.6 mm. longis, 1.2–1.4 mm. latis; petalis obovato-oblongis, truncatis vel vix emarginatis, uninervatis, 1.4–1.5 mm. longis, 0.7–0.8

mm. latis. Labello carnoso, spathulato, concavo, antice rotundato, basi in calcarem cylindricum producto, 3–3.4 mm. longo. Columna valde abbreviata, subglobosa, carnosa. Ovario cum pedicello 2.4–3.5 mm. longo.

Tufted epiphyte with simple non-pseudobulbous stems; stems 3–15 cm. long, 2 mm. in diameter, curving upwards in all directions, bases ensheathed in the remnants of old petiolar sheaths, the crowns carrying 7–18 ash-green, semiterete leaves, twisted clockwise or counter-clockwise. Leaves 4–6 cm. long, 0.3 cm. broad, linear, fleshy, distichous, notched, bases sheathing the internodes above (Plate XVIII). Flowers minute, white, in leaf opposed racemose panicles, 13–14 cm. long. Peduncle 6.5–7 cm. long, flat, green with a number of short, membranous, sterile bracts; branches of the rachis few, 2.5–5.5 cm. long and spiciform. Floral bracts 1.8–2.4 mm. long, 1.4–1.6 mm. broad, triangular ovate, acute, faintly undulate, 1-veined. Dorsal sepal 2 mm. long, 1–1.1 mm. broad, oblong, obtuse, 1-veined; lateral sepals 2.4–2.6 mm. long, 1.2–1.4 mm. broad, obliquely oblong, rounded, 1-veined; petals 1.4–1.5 mm. long, 0.7–0.8 mm. broad, obovate-oblong, truncate or faintly emarginate, 1-veined; lip fleshy, white, 3–3.4 mm. long, notched half-way, concave and rounded dorsally, lateral lobes inconspicuous, mid-lobe 1.5 mm. long, fleshy, spatulate; spur short, cylindrical and rounded. Column 0.8 mm. high, 0.6 mm. broad, globular. Anther terminal, 2-loculed; pollinia 4, unequal, collateral in two pairs, large pollinia 0.34 mm. long, 0.16 mm. broad and the smaller ones 0.24 mm. long, 0.1 mm. broad attached to a lanceolate stipe 0.44 mm. long, 0.2 mm. broad, by short, flat caudicles. Ovary with pedicel 2.4–3.5 mm. long. Fruit a small, spreading, clavate, pedicelled capsule, 4 mm. long.

This species is allied to *Saccolabium niveum* Lindl. from which it differs in the linear twisted leaves, larger

PLATE XVIII



SACCOLABIUM TORTIFOLIUM *Jayaweera*. 1, plants with inflorescences. 2, apical portion of a shoot showing twisted leaves. 3, flower from top. 4, flower from side. 5, lip, column (hidden between the lateral lobes of the lip) and spur from side. 6, bract, sepals, petals, lip and column spread out from front. 7, pollinia with strap. 8, anther from inside.

sepals and petals, oblong lateral sepals, larger pollinia and the column taller than broad.

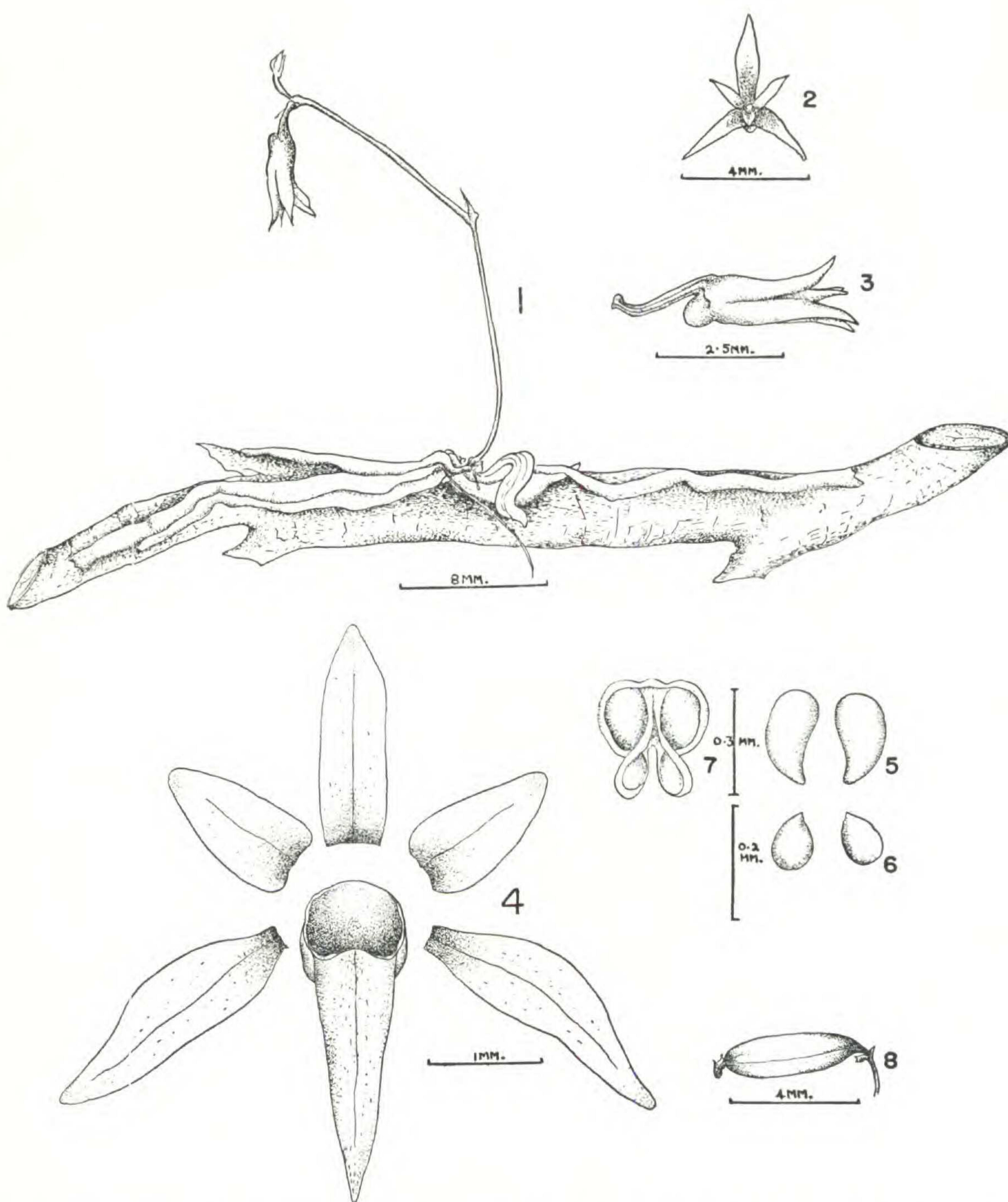
CEYLON: Hunnasgiriya, in submontane or midcountry tropical wet evergreen forests at 1150 meters altitude, August 21, 1959, Jayaweera 1850 (TYPE).—Same locality and date, Jayaweera 1851, 1852.—Daulagala, July 25, 1960, Jayaweera 2185. It flowers from April to August. Two of its many host plants are *Schefflera stellata* (Gaertn.) Baill. and *Macaranga peltata* (Roxb.) Muell. Arg.

**Taeniophyllum gilimalense Jayaweera sp. nov.**

Epiphytica, ebulbosa, sine foliis et caule. Radicibus crasse carnosis, leviter flexuosis, glabris. Pedunculo filiformi, 2 cm. longo. Bracteis minutissimis, lanceolatis, acutis. Floribus minutis, succedaneis, viridi-luteis, 3.3 mm. longis. Sepalis petalisque inter se brevissime, i.e., supra basin connatis. Sepalo postico oblongo-lineari, acuto vel rotundato, uninervato, 1.9 mm. longo, 0.5 mm. lato; sepalis lateralibus ovato-lanceolatis, obtusis, uninervatis, 2.4 mm. longis, 0.6 mm. latis. Petalis ovatis, obtusis, uninervatis 1.3 mm. longis, 0.7 mm. latis; labello cymbiformi, acuto, uninervato, basi in sacculum subglobosum producto, 2.1 mm. longo, 0.7 mm. lato. Columna brevissima, globiformi, brachiis 2, porrectis in fronte. Ovario cylindrico, cum pedicello ca. 2 mm. longo.

Minute, non-pseudobulbous epiphyte without stems and leaves. Roots flattened, fleshy, dark green and tortuous, 2.5–4 cm. long, 3 mm. broad. Leaves, reduced to minute transparent scales (Plate XIX). Flowers minute, greenish yellow 3.3 mm. long in 2- or 3-flowered racemes, flowers opening one at a time. Peduncle jointed, slightly bent at the joint, 2 cm. long, with a single, sterile bract. Floral bracts, minute, lanceolate, acute. Sepals, petals and lip connate at the base only. Dorsal sepal 1.9 mm. long, 0.56 mm. broad, linear-oblong, acuminate, subacute or rounded, 1-veined; lateral sepals 2.4 mm. long, 0.64 mm. broad, lanceolate, rounded, 1-veined;

PLATE XIX



*TAENIOPHYLLUM GILIMALENSE* Jayaweera. 1, plant with inflorescence on a twig of the host plant. 2, flower from front spread out. 3, flower from side. 4, sepals, petals and lip spread out from front. 5, large pollinia. 6, smaller pollinaria 7, anther from inside. 8, fruit.

petals 1.3 mm. long, 0.7 mm. broad, ovate, rounded, 1-veined; lip 2.1 mm. long, 0.7 mm. broad, cymbiform, subulate, acute, 1-veined, base produced into a rounded, saccate spur, 0.5 mm. long and 0.54 mm. in diameter. Column very short, globular, broad, with two projecting arms in front. Anther terminal, depressed, 4-loculed; pollinia 4, pyriform, sessile on a broad gland: large pollinia 0.26 mm. long, 0.14 mm. broad, slightly curved, and the smaller ones 0.1 mm. long, 0.06 mm. broad. Fruit a cylindric capsule, 4 mm. long. 1.3 mm. broad.

This species appears to be related to both *Taeniothylum inconspicuum* Schltr. and *T. capillare* J.J. Smith from Celebes but differs from both in the ovate, rotund petals. *T. inconspicuum* has a longer spur while *T. capillare* is a larger plant bearing bigger flowers than this species. It differs from *T. Alweissii* Lind. in the larger size of the plant with longer and broader roots, larger flowers with 1-veined sepals and petals and smaller fruits.

CEYLON: Ratnapura District, Gilimale, in tropical wet evergreen forests at 175 meters altitude, July 6, 1960, Jayaweera 2182 (TYPE). It flowers in July.